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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,512	05/18/2001	Kiminori Tamai	208808US2	4273

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EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 03/11/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/859,512

Applicant(s)

TAMAI ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 6,7 and 14-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5 and 8-13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The specification is silent as to the claimed surface resistivity values for the claimed transparent conductive multi-layer structure. The specification speaks of “surface resistance” values (see entire specification), but does not specifically mention “surface resistivity” values.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,662,962 to Kawata et al (hereinafter referred to as Kawata).

Regarding claims 8-10 and 12, Kawata discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (column 2, lines 58-63, column 3, lines 51-55, and column 5, lines 11-23). Kawata

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discloses that the surface resistivity may range from 630 to 1700 Ω/\square and the visible light transmittance may range from 94.8 to 96 (columns 13 and 14, Tables 1 and 3).

Regarding claim 9, Kawata discloses that the particles are ITO (column 5, lines 11-23).

Regarding claim 10, Kawata discloses that the substrate may be glass (column 2, lines 58-63).

Regarding claim 12, Kawata discloses that the structure may have a haze ranging from 0 to 1% (column 5, lines 5-10 and columns 13 and 14, Tables 1 and 3).

5. Claims 8-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Publication No. 08-199096 to Masahito et al. (hereinafter referred to as Masahito).

Regarding claims 8-10 and 12, Masahito discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (Patent Abstract). Masahito discloses that the structure may have a surface resistance of 10 to $10^2 \Omega/\square$ (see entire document). Masahito does not disclose the visible light transmittance, but considering the substantially identical transparent conductive multi-layer structure of Masahito compared to the applicants' structure, it appears that the structure of Masahito would possess a visible light transmittance of at least 70%.

Regarding claim 9, Masahito discloses that the particles are ITO (Patent Abstract).

Regarding claim 10, Masahito discloses that the substrate may be glass (see entire document).

Regarding claim 12, Masahito discloses that the structure has a haze of less than 1% (see entire document).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata in view of US Patent No. 6,398,900 to Hieda et al. (hereinafter referred to as Hieda).

Kawata discloses a transparent conductive multi-layer structure which comprises a substrate overlaid with a conductive layer containing fine conductive particles (column 2, lines 58-63, column 3, lines 51-55, and column 5, lines 11-23). Kawata does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield structure to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (column 1, lines 18-31, column 4, lines 45-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Kawata to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

Regarding claim 2, Kawata discloses that the particles are ITO (column 5, lines 11-23).

Regarding claim 3, Kawata discloses that the substrate may be glass (column 2, lines 58-63).

Regarding claim 4, Kawata discloses that the structure is overlaid with a hard coating layer (column 5, lines 11-23).

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Regarding claim 5, Kawata discloses that the structure has a haze ranging from 0 to 1% (column 5, lines 5-10 and columns 13 and 14, Tables 1 and 3).

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata as applied to claims 8-10 and 12 above, and further in view of US Patent No. 6,316,110 to Anzaki et al. (hereinafter referred to as Anzaki).

Kawata does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating resin layer to protect the shield from air and to prevent the glass from shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coating resin layer to the structure of Kawata, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata as applied to claims 8-10 and 12 above, and further in view of US Patent No. 5,886,819 to Murata et al. (hereinafter referred to as Murata).

Kawata does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Kawata to acquire any desired haze value, because some applications desire a higher haze value.

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10. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito in view of US Patent No. 6,398,900 to Hieda et al. (hereinafter referred to as Hieda).

Masahito discloses a transparent conductive multi-layer structure which comprises a substrate overlaid with a conductive layer containing fine conductive particles (Patent Abstract). Masahito does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (column 1, lines 18-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Masahito to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel will be shielded.

Regarding claim 2, Masahito discloses that the particles are ITO (Patent Abstract).

Regarding claim 3, Masahito discloses that the substrate may be glass (see entire document).

Regarding claim 5, Masahito discloses that the structure has a haze of less than 1% (see entire document).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito in view of Hieda as applied to claims 1-3 and 5 above, and further in view of US Patent No. 6,316,110 to Anzaki et al. (hereinafter referred to as Anzaki).

Masahito does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating resin layer to protect the shield from air and to prevent the glass from

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shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coat resin layer to the structure of Masahito, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito as applied to claims 8-10 and 12 above, and further in view of US Patent No. 6,316,110 to Anzaki et al. (hereinafter referred to as Anzaki).

Masahito does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating resin layer to protect the shield from air and to prevent the glass from shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coat resin layer to the structure of Masahito, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masahito as applied to claims 8-10 and 12 above, and further in view of US Patent No. 5,886,819 to Murata et al. (hereinafter referred to as Murata).

Masahito does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the

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art at the time the invention was made to roughen the surface of the article of Masahito to acquire any desired haze value, because some applications desire a higher haze value.

Response to Arguments

14. Applicant's arguments filed 2/6/2003 have been fully considered but they are not persuasive.

The applicant asserts that Kawata fails to disclose or suggest the limitations recited in pending claim 8. The examiner respectfully disagrees. The applicant cites Example 5 as demonstrating that Kawata does not disclose or suggest the limitations recited in pending claim 8, but the applicant fails to comment on Example 1 (after overcoated) or Example 2 (after overcoated). The examiner asserts that Examples 1 and 2 teach a transparent conductive multi-layer structure which comprises a substrate overlaid with a support which in turn is overlaid with a conductive layer containing fine conductive particles, said multi-layer structure having a surface resistance of $10 - 10^3 \Omega/$ and a visible light transmittance of at least 70%.

The applicant asserts that the examiner has not presented a factual basis or technical basis for the rejections in view of Masahito, because Masahito does not specifically disclose a visible light transmittance of at least 70%. The examiner respectfully disagrees. In the Patent Abstract Masahito discloses that the glass plate covered with the transparent conductive film is "excellent in transparency." Although Masahito does not appear to specifically disclose the visible light transmittance, considering that the Masahito discloses that the article is "excellent in transparency" there is substantial factual basis for asserting that the article has a visible light transmittance of at least 70%. In addition, considering the substantially identical article of

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Masahito, compared to the claimed article, it appears that the article of Masahito possesses a visible light transmittance of at least 70%.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

The applicant asserts that there is no basis for the combination of Kawata in view of Hieda. The examiner respectfully disagrees. Kawata teaches an article that relates to, among other things, electromagnetic wave shields (column 1, lines 9-14). Hieda discloses an invention that relates to a method of sticking an electromagnetic wave shield directly onto a front surface of a plasma display panel (column 1, lines 7-13). Kawata discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (column 2, lines 58-63, column 3, lines 51-55, and column 5, lines 11-23). Kawata does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield structure to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel (column 1, lines 18-31, column 4, lines 45-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave

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shield of Kawata to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel would be shielded.

The applicant asserts that there is no basis for the combination of Kawata in view of Murata. The examiner respectfully disagrees. Kawata teaches an article that relates to, among other things, a transparent electroconductive substrate most suitably used in liquid crystal displays (column 1, lines 9-14). Murata relates to liquid crystal displays (column 1, lines 6-61). Kawata does not mention roughening the surface of the article to increase the haze value, but Murata discloses that it is known to roughen the surface of an article to increase the haze value (column 1, lines 6-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to roughen the surface of the article of Kawata to acquire any desired haze value, because some applications desire a higher haze value.

The applicant asserts that there is no basis for the combination of Masahito in view of Hieda and/or in view of Anzaki. The examiner respectfully disagrees. Masahito discloses an invention that relates to electromagnetic wave shields (Detailed Description of the Invention). Hieda discloses an invention that relates to a method of sticking an electromagnetic wave shield directly onto a front surface of a plasma display panel (column 1, lines 7-13). Anzaki discloses an invention that relates to electromagnetic wave shields (column 1, lines 5-15).

Masahito discloses a transparent conductive multi-layer structure that comprises a substrate overlaid with a conductive layer containing fine conductive particles (Patent Abstract). Masahito does not disclose placing the structure on a substrate, but Hieda discloses that it is known to attach an electromagnetic wave shield to the front surface of a plasma display panel to shield electromagnetic waves and near-infrared rays generated from a plasma display panel

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(column 1, lines 18-31). It would have been obvious to one having ordinary skill in the art at the time the invention was made to attach the electromagnetic wave shield of Masahito to a plasma display panel, as disclosed by Hieda, because the electromagnetic waves and near-infrared rays generated from the plasma display panel will be shielded.

Masahito does not disclose the use of an anchor layer and a hard coating layer, but Anzaki discloses that it is known to coat an electromagnetic wave shield with an adhesive layer and a hard coating resin layer to protect the shield from air and to prevent the glass from shattering when broken (column 6, lines 36-45 and column 7, lines 39-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include an anchoring adhesive layer and a hard coat resin layer to the structure of Masahito, as disclosed by Anzaki, because the layers would protect the shield from air and prevent the glass from shattering when broken.

Conclusion

15. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.



atp
March 4, 2003

Andrew T Piziali
Examiner
Art Unit 1775


DEBORAH JONES
SUPERVISORY PATENT EXAMINER